

COMMENT/RESPONSE DOCUMENT

**CITY OF READING WWTP
NPDES APPLICATION NO. PA0026549**

The following comments were received from Ralph Johnson, Wastewater Manager of the City of Reading, in a letter dated October 16, 2013. The Department's replies follow each comment.

Part A-Supplemental Information

1. States that the effluent limits were determined using an effluent discharge of 20.5 MGD, the average annual flow both before and after the anticipated upgrade. Currently our design capacity is 28.5 MGD and the future design capacity (after the upgrade) will be 20.5. It is unclear why the statement "average annual flow both before and after the anticipated upgrade" is included here.

Response:

The Department agrees that the WQM permit 0686404 for Reading WWTP, issued August 1998, included an average hydraulic capacity of 28.5 MGD (and a maximum hydraulic capacity of 42.75 MGD). The WWTP has not, however, been able to operate at its design capacity and still meet its NPDES permit limits which has prompted the planned upgrade. The former NPDES permit used 20 MGD in the models to derive limits for conventional pollutants, after a review of past Discharge Monitoring Reports (DMRs).

Past DMRs were reviewed for preparing this renewal permit to determine an appropriate design flow to use as model inputs and for the mass load calculations. The maximum monthly averages reported were as follows:

2009 – 19.81 MGD
2010 - 20.2 MGD
2011 – 17.0 MGD
2012 - 21.65 MGD

The City of Reading Act 537 Plan was approved October 15, 2012, for a treatment plant capacity of 20.5 MGD as an annual average design flow consistent with the Act 537 Special Study dated August 24, 2012 submitted by the City of Reading.

The NPDES Renewal Permit application, received April 29 2013, included an Average Annual Design Flow (AAF) of 20.47 MGD (Part C of the completed NPDES Application for Permit to Discharge Sewage (Long Form)) . The DEP permit writer did

contact the City of Reading staff to discuss the flows before and after the upgrade following the receipt of the NPDES renewal permit application. On an August 8, 2013 speaker-phone call, Bonnie Boylan of DEP asked City of Reading staff (Roger Hillibush, Amy Morriss, and Scott Perry) if their application should show one design AAF before the upgrade and one design AAF after the upgrade since the upgrade is expected to be completed before the 5-year term of the NPDES permit expires. Their reply was no, that the 20.5 MGD design AAF was representative of both flows, before and after the upgrade. The maximum monthly averages according to the DMRs reviewed were consistent with this assertion. The NPDES permit was therefore based on that information.

2. States when the upgrade is complete, the hydraulic design capacity will be considered 27.8 MGD for determining hydraulic overload per Chapter 94. How was the 27.8 MGD calculated?

Response: The 27.8 MGD was taken from Part C. of the completed NPDES Application for Permit to Discharge Sewage (Long Form): Hydraulic Design Capacity. It matches the Projected Maximum Monthly Design flow included in Table 5-4 of the August 24, 2012, Act 537 Special Study submitted by the City of Reading.

The Act 537 Plan was approved for a maximum monthly flow of 27.8 MGD and an annual average design flow of 20.5 MGD, based on the Act 537 Special Study dated August 24, 2012. Accordingly, the new WQM permit to be issued for the upgrade will establish 27.8 MGD as the hydraulic capacity for the upgraded wastewater treatment plant and 27.8 MGD will be used for determining hydraulic overload per Chapter 94.

Before the upgrade is complete, the hydraulic capacity of the existing treatment plant is not nearly at 28.5 MGD (the average hydraulic capacity of the former WQM permit) or at 27.8 MGD (the hydraulic capacity from the application). Although an amendment to the former WQM permit was never done to reduce the hydraulic capacity, the effective hydraulic capacity is closer to 20 MGD or 20.5 MGD. The Act 537 Special Study from May 1, 2012, stated:

“In summary, the existing plant reliable treatment capacity is ...20 MGD maximum monthly flow, with a risk of non-compliance with plant effluent discharge standards if all plant process infrastructure is not well maintained and operated efficiently.”

Note that “hydraulic design capacity” is defined in PA Code Title 25 Chapter 94 as “the maximum monthly design flow, expressed in millions of gallons per day, at which a plant is expected to consistently provide the required treatment or at which a conveyance structure, device or pipe is expected to properly function without creating a backup, surcharge or overflow. This capacity is specified in the water quality management permit (Part II permit issued under Chapter 91)(relating to general provisions).” “Hydraulic overload” is defined in PA Code Title 25 Chapter 94 as “the condition that occurs when the monthly average flow entering a plant exceeds the hydraulic design capacity for 3-

consecutive months out of the preceding 12 months or when the flow in a portion of the sewer system exceeds its hydraulic carrying capacity.”

As a result of the correction of Note 2 discussed here, an ensuing correction to paragraph K in Part C.I. was also made: the permittee cannot accept hauled-in waste when the treatment facility flow exceeds the Chapter 94 hydraulic design capacity multiplied by a peaking factor of three. Before the treatment plant upgrade, that equates to 61.5 MGD: $20.5 \text{ MGD} \times 3 = 61.5 \text{ MGD}$. After the treatment plant upgrade, that equates to 83.4 MGD: $27.8 \text{ MGD} \times 3 = 83.4 \text{ MGD}$.

3. End of the paragraph states: when the upgrade is complete, the organic design capacity will be considered 98,100 lbs. BOD/day for determining hydraulic overload. Should hydraulic overload actually read Organic overload?

Response: Yes, you are correct that “hydraulic overload” should be “organic overload”. The final permit has been corrected. Also, in the event the WQM permit for the upgrade differs from the NPDES application information, the language in this paragraph was modified to read as follows: “When the upgrade to the treatment plant is complete, the organic design capacity will be considered 98,100 lbs BOD₅/day, or the amount specified in the upgrade’s Water Quality Management permit, for determining Organic overload per Chapter 94.”

Part C

I. Other Requirements - Paragraphs J and L.

Amy Morriss spoke with you in regards to the requirements of the Delaware River Basin Commission (DRBC). Based on that conversation it is our understanding that the City of Reading WWTP has an existing docket with no expiration date. The DRBC dockets typically have expiration dates but due to the age of the original docket and no expiration date, the City of Reading has no obligation to contact the DRBC about permit renewal at this time. The DRBC can contact us or DEP to add to the drafted permit.

Response: Yes, Bonnie Boylan of PADEP did speak to Amy Morriss of City of Reading and to the DRBC about the Reading WWTP. The DRBC was copied by the PADEP on the NPDES renewal application and on the draft NPDES permit. They submitted no comments. At their request, they will also be copied on the Internal Review and Recommendations preceding the WQM permit as well as the issued WQM permit for the Reading WWTP upgrade. Per the phone conversation with the DRBC on October 7, 2013, Reading WWTP was issued a docket by the DRBC in 1986 with no expiration date stated. If in the future the WWTP intends to increase their design flow, they will need to renew their DRBC docket.

The language in Part C.I., Paragraphs J and L, has been merged into one paragraph (J) and slightly modified as shown below. Because the facility’s discharge is within the jurisdiction of the DRBC and PADEP cannot waive any requirements the DRBC imposes in the future, such a permit condition continues to be appropriate.

“J. This discharge is subject to effluent limitations and conditions as developed and required by the Delaware River Basin Commission (DRBC). The DRBC limits may be more stringent. If so, the permittee shall comply with any more stringent effluent limitations or standards contained in the DRBC docket, in accordance with 25 Pa. Code Section 92a.12(b). DEP may reopen and amend this permit to conform with requirements in any future DRBC docket, if appropriate. More information about DRBC requirements is available by contacting the DRBC at (609) 883-9500. “

III. Paragraph E.

To expedite the headworks analysis and local limits development, would it be possible to provide the water quality standards, assumptions, criterion, and flows used in permit development as applicable to include the parameters specifically mentioned in the draft permit?

Response: Yes, the Fact Sheet that supports the draft permit has been electronically forwarded to Mr. Ralph Johnson of the City of Reading, as requested.

V. WET testing

The re-testing for a failed endpoint will have a significant financial impact on the budget.

Response: The same Whole Effluent Toxicity Testing requirements are being included in all permits for major POTW dischargers. The re-test need only be conducted for the species with the failure. A re-test is a means of mitigating the failed test: “if a passing result is determined for all endpoints in a re-test, the permittee may resume annual monitoring”. If two failed tests occur consecutively, i.e. the original failed WET test and the re-test, then the frequency for WET testing increases to quarterly and a Toxics Reduction Evaluation (TRE) must be initiated. One re-test that achieves a passing result is less expensive than conducting a TRE and increased WET testing.

DEP agrees that quarterly WET testing would be expensive but we cannot ignore the results of a failed WET test. If a WET test fails, there is concern that the effluent is demonstrating potential toxicity for the aquatic life in the receiving water.

VI. Requirements applicable to stormwater outfalls.

-Section is numbered incorrectly. Starts with section B – there is no A!

Response: Yes, the automatic formatting failed in this case and the section outline formatting has been corrected in the final permit.

-Please see attached list of Stormwater outfalls. A new outfall was uncovered recently during the neighbors' excavation and installation of fencing. It is listed as Outfall #008 and the majority of the source water is from the neighbor (Berks Fire Training Center). There is no process in the vicinity of this outfall. We were unaware of this outfall during permit renewal; therefore, no testing was performed at this site.

Response: This outfall has been added to the final permit with the latitude and longitude indicated in Reading's October 16, 2013, letter. As such, it will be subject to the same requirements as the other stormwater outfalls: a) to only discharge non-polluting stormwater; b) to be covered by a Preparedness, Prevention and Contingency (PPC) Plan; to adhere to Minimum Required Best Management Practices (BMPs) listed in permit; and to undergo an annual inspection with the results recorded on the "Annual Inspection Form for NPDES Permits for Discharges of Stormwater Associated with Industrial Activities". Stormwater sampling at this outfall will be expected as part of the next renewal application.

-The Outfalls are mapped correctly using the Reading GIS database. We have enclosed a map with correct locations in yellow versus NPDES listings of stormwater outfalls in blue. The outfalls that need to be corrected are as follows: Outfalls #1, #4, #5, #6.

Response: The stormwater outfall locations shown in the draft permit were copied from the NPDES renewal application, Part C. They have been corrected in the final permit to match the locations provided in Reading's October 16, 2013 letter.